DOCUMENT RESUME

ED 131 257 08 CE 008 415

AUTHOR Borhani, Rahim
TITLE A Consortium Approach to Exemplary Career Education Program Development Involving Two Unified School Districts and Two Teacher Education Institutions. Final Report.
INSTITUTION Kansas State Dept. of Education, Topeka. Div. of Vocational Education.; Kansas State Univ., Manhattan.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
BUREAU NO V361179
PUB DATE Jun 76
GRANT OEG-0-73-5313
NOTE 79p.

EDRS PRICE MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS Achievement Tests; Aptitude Tests; *Career Education; Consortia; Cooperative Programs; Demonstration Projects; *Educational Assessment; Elementary Secondary Education; Grade 3; Grade 6; Grade 8; Grade 12; Inservice Teacher Education; Instructional Materials; Material Development; Post Testing; Pretesting; Program Development; *Program Effectiveness; Program Evaluation; School Districts; State Programs; Student Evaluation; *Student Testing; Teacher Education; Teachers Colleges
IDENTIFIERS Kansas; Kansas (Emporia); Kansas (Pittsburg)

ABSTRACT

This is the final report of a Kansas state project which had four purposes: (1) Involvement of teacher training institutions with the unified school districts' career education program in order to gather information needed to provide realistic experiences for inservice education of future career education teachers, (2) involve the community in school activities, (3) generate additional occupational and career education materials for use of teachers and students, and (4) extend career knowledge opportunities to more students in Kansas. The first section of the report is an evaluation report of the project in the Unified School District in Pittsburg, Kansas, which presents results of a variety of standardized tests administered to students in grades 3, 6, and 9 to measure perceptions of themselves and the relations to peers, teachers and school; achievement in skills and content areas of the curriculum; and knowledge of different careers. (Tests used were the National Testing Service Self Observation Scales, the Harcourt Brace Metropolitan Achievement Tests, and the McGraw Hill Career Maturity Inventory.) The second section of the report, an evaluation of the project in Unified District in Emporia provides (1) background information of the overall Kansas project, (2) abstracts of characteristics of the community and school system, (3) description of the purpose, philosophy, and objectives of career education program, (4) process evaluation, and (5) product evaluation. It concludes that each of the goals was realized to a great extent and that the program increased student, faculty, and community awareness of how career education can be meaningfully integrated into many aspects of the educational system. (TA)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED131257

FINAL REPORT

A CONSORTIUM APPROACH TO EXEMPLARY CAREER EDUCATION PROGRAM DEVELOPMENT INVOLVING TWO UNIFIED SCHOOL DISTRICTS AND TWO TEACHER EDUCATION INSTITUTIONS

PROJECT NO. V361179
GRANT NO. OEG-0-73-5313

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

RAHIM BORHANI, Ph. D.
KANSAS STATE UNIVERSITY
MANHATTAN, KANSAS

JUNE 1976

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CE 008 415

FINAL REPORT

A CONSORTIUM APPROACH TO EXEMPLARY CAREER EDUCATION PROGRAM DEVELOPMENT INVOLVING TWO UNIFIED SCHOOL DISTRICTS AND TWO TEACHER EDUCATION INSTITUTIONS

PROJECT NO. V361179
GRANT OF CONTRACT NO. OEG-0-73-5313

EXEMPLARY PROJECT IN VOCATIONAL EDUCATION
CONDUCTED UNDER
PART D OF PUBLIC LAW 90-576

The project reported herein was performed pursuant to a grant from the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government Sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

RAHIM BORHANI, Ph. D.
KANSAS STATE UNIVERSITY
MANHATTAN, KANSAS

JUNE 1976

CAREER EDUCATION EVALUATION

UNIFIED SCHOOL DISTRICTS NO. 250

PITTSBURG, KANSAS

STUDENTS EVALUATION
PITTSBURG, KANSAS

A variety of standardized tests were used in the evaluation of students. These tests evaluated the students' perceptions of themselves and their relations to peers, teachers and school; they also measured the achievement of students in the important skills and content areas of the school curriculum. Their knowledge of different careers was also evaluated.

The Self Observation Scales published by the National Testing Service were administered to students in grades three and six. This test was selected from those recommended in the Handbook for the Evaluation of Career Education published by the U.S. Office of Education. This test was designed to measure the healthy and positive dimensions of children's behavior.

The acknowledgement of substantial relationships among children's feelings about themselves, classroom behavior, and scholastic achievement as essentials to children's effective development has led to an increasing level of awareness of the importance of children's effective development. The Self Observation Scales is a

nationally normed, empirically validated and multidimensional tool designed to measure (1) self acceptance (2) self security (3) social maturity (4) social confidence (5) school affiliation (6) teacher affiliation (7) peer affiliation and (8) achievement motivation.

The tests given in the Unified School District No. 250 were computer analyzed by the National Testing Service. In addition to a standard score on each scale received by each child, national percentiles and stanine equivalents were given. For each class or group there is an explanation of how the results are presented, followed by a roster, a summary table and a profile. The results from these Self Observation Scales tests could aid the teacher, counselor or psychologist in assessing the effective development of the children tested.

The Metropolitan Achievement Tests published by Harcout-Brace, Inc., were also given to third and sixth grade students. The objective of this test is to assess what is actually taught in the classroom. These tests were given as part of the regular evaluation of the school career education program. The objective was to investigate the possibility of career education activities enhancing or impeding the academic achievement of the students. The comprehensive nature of the test series permits continuous measurement of student progress from kindergarten through the ninth grade, in subject matter areas relevant to each grade level. The tests, when given annually, could provide a survey of each student's yearly progress in different subject

areas. The group scores could aid administrators in assessing school-wide and community-wide progress toward educational goals. A broader perspective is further provided through comparison with national norms for these tests.

Students in the ninth grade were given the Career Maturity Inventory test published by McGraw-Hill. This test was selected from those recommended in the Handbook for the Evaluation of Career Education Programs. This test measured knowledge of self and knowledge of careers respectively.

Ninth grade students in the career math classes were given a pre-test and post-test to determine their achievement in mathematics skills.

EVALUATION IN GRADE 3

Self Observation Scales. The following scales of the Self Observation Scales were measured in this evaluation.

Scale I - Self Acceptance

Scale II - Social Maturity

Scale III - School Affiliation

Scale IV - Self Security

The combination of these four scales were intended to measure the effects of possible self-concept on career education. These scales are described by the National Testing Service in the following manner:

Scale I - Self Acceptance. Children with high scores view themselves positively and attribute to themselves the qualities of happiness,

importance, and general competence. These children see themselves as important to other people including authority figures and their peers. Children with low scores view themselves as inadequate, unsuccessful, and undesirable. They do not see themselves as happy, and they view themselves as relatively unimportant to authority figures and their peers.

Scale II - Social Maturity. Children with high scores view their relationships and interactions with other people positively. They view themselves as independent, persistent, and sensitive to other people's needs and feelings. Children with low scores view themselves as quitters and loners. They see themselves as wanting to dominate in peer situations, yet would prefer to be alone if they had a choice. Low scores reflect an uncertainty in social interactions.

Scale III - School Affiliation. Children with high scores view school as a positive influence in their lives. They enjoy going to school, and they enjoy the activities associated with school. Children with low scores view school as an unhappy place to be. They do not enjoy most school related activities and are negative about the importance of school to their lives.

Scale IV - Self Security. Children with high scores report a low level of anxiety and a high level of emotional stability. These children view themselves as in harmony with significant people around them, and they are confident about new experiences and their ability to perform adequately. Low scoring children report being anxious,

depressed, and unsure of themselves. New experiences tend to be anxiety provoking, because of the children's uncertainty about their ability to perform.

Approximately 200 students were randomly selected from all six of the elementary schools in Unified School District No. 250. Saint Marys, a parochial school which did not have a career education program, was used as the control group. The results of the analysis of the six schools and the control group are shown in Tables 1 through 4.

TABLE I
SOS SCALE I - SELF ACCEPTANCE
GRADE 3

School	N	Ave. Score	S. D.	APS	Difference
Lakeside	40	50.67	8.82	53.38	-3.91
Westside	27	49.37	11.94	52.04	-5.25
Eugene Field	46	48.80	9.92	48.85	-8.44
Lincoln	35	51.83	9.99	57.17	-0.12
Nettles	37	54.70	8.75	66.16	8.87
Washington	21	52.33	9.89	59.62	2.23
Saint Marys	17	51.00	11.84	57.29	**

TABLE 2
SOS SCALE II - SOCIAL MATURITY
GRADE 3

School	N	Ave. Score	S. D.	APS	Difference
Lakeside	40	52.00	8.15	49.42	-6.11
Westside	27	54.78	7.90	58.44	2.91
Eugene Field	46	56.78	6.36	65.46	9.93
Lincoln	35	56.57	4.69	65.20	9.67
Nettles	37	58.49	3.69	72.41	16.47
Washington	21	59.00	5.98	73.24	17.71
Saint Marys	17	53.59	9.08	55.53	**

TABLE 3
SOS SCALE III - SCHOOL AFFILIATION
GRADE 3

School	N	Ave. Score	S. D.	APS	Difference
Lakeside	40	43.17	10.92	33.20	-11.33
Westside	27	47.63	10.95	46.48	1.95
Eugene Field	46	53.33	8.29	63.20	18.67
Lincoln	35	50.17	9.57	52.49	7.96
Nettles	37	52.27	7.30	58.78	14.25
Washington	21	58.00	4.11	77.43	32.90
Saint Marys	17	46.88	11.40	44.53	**

TABLE 4
SOS SCALE IV - SELF SECURITY
GRADE 3

School	N	Ave. Score	S. D.	APS	Difference
Lakeside	40	62.25	9.98	56.45	-5.49
Westside	27	53.52	10.45	60.67	-1.27
Eugene Field	46	52.96	8.63	59.65	-2.29
Lincoln	35	50.77	8.20	52.46	-9.29
Nettles	37	57.57	8.09	73.19	11.25
Washington	21	50.33	9.62	51.38	-10.56
Saint Marys	17	53.24	11.12	61.94	**

Scoring of the Self Observation Scales tests is based on national norms. The scores are standardized to a distribution with a mean of 50 and a standard deviation of 10. Large probable errors of the means results from the largest standard deviations together with the relatively small groups tested. Statistically, the means derived from this test must be considered rather unstable. A mean difference of from 8 to 10 points is required to show statistical significance at the traditional levels of confidence. Generally, the means could be either too high or too low due to a single exceptional student. In cases like this the median would be a more accurate measure of the performance of the students on the test. The national percentiles, and stanine equivalents provided for individual students could be quite helpful to the teacher in assessing the individual's needs in specific areas tested.

Out of the 24 possible comparisons (i.e. six schools x 4 scales) the schools in Unified School District No. 250 exceeded the national norm of 50 by 19 times and the average percentile score of the control group 14 times. In the Self Acceptance category, except for Nettles and Washington, the schools were below the APS of the control group. All but Lakeside exceeded the control group in the Social Maturity category. School Affiliation came out better than the control group in all schools except for Lakeside. The subjects in the control group ranked high in Self Security and were only outranked by Nettles. Lakeside is the only school that consistently ranked below the control group in all areas.

METROPOLITAN ACHIEVEMENT TESTS

The Metropolitan Achievement Test scores of the third grade students were analyzed with the (1) comparisons between pre-test and post-test scores and (2) comparisons between the post-test scores and those made by the control group. Randomly selected third graders of a parochial school which did not have career education served as the control group.

The pre-test was given in September 1975 and the post-test in March 1976. There are seven separate tests of academic achievement at the third grade level. These are described by the publishers in the following manner:

1. Word Knowledge

   a. Selecting from among four words the one that best describes a picture.

   b. Identifying a synonym, an antonym, or a word from a given classification.

2. Word Analysis

   Identifying a dictated word from among four words that are similar in configuration and sound pattern.

3. Reading

   a. Sentences - Selecting from three sentences the one that best describes a picture.

   b. Stories - Reading a paragraph and answering questions about it.

4. Spelling

   Writing the correct spelling of commonly used words dictated by the teacher.

5. Mathematics Computation

   Adding one- and two-digit numbers, three addends, and missing addends; subtracting one-, two-, and three-digit numbers; some simple multiplying; some regrouping and horizontal notation introduce.

6. Mathematics Concepts

   Understanding basic mathematical principles such as place value, measurement, laws and properties of number systems, arrays, sets, and inequalities.

7. Mathematics Problem Solving

   Applying mathematical knowledge in solving numerical problems involving addition, subtraction, multiplication, division, rate, multiple-step solutions, and the use of number sentences.

In addition to results of the above seven areas, a weighted average of the first four areas are given under the category of Total Reading and the last three areas under the category of Total Mathematics. The outcome of this pre-test and post-test are shown in Table 5. Scores are given in grade equivalents; hence scores of 3.0 and 3.5 are expected on each pre-test and post-test.

TABLE 5
METROPOLITAN ACHIEVEMENT TESTS
GRADE 3

Test	Pre-Test Sept. 1975 N	Mean	Post-Test March 1976 N	Mean	D	P
Word Knowledge	220	3.0	248	3.8	0.8	.005
Word Analysis	220	3.1	248	3.8	0.7	.005
Reading	220	2.8	247	3.5	0.7	.005
Spelling	220	3.0	249	3.4	0.4	.005
Total Reading	220	2.	247	3.6	0.7	.005
Math Comp.	220	3.0	249	3.8	0.8	.005
Math Conc.	219	3.0	249	3.8	0.8	.005
Math Prob. Solving	219	3.0	248	3.4	0.4	.005
Total Math	219	2.9	248	3.6	0.7	.005

D is the difference between pre-test and post-test mean scores.

P is probability that the differences in distribution of scores on this test are significant.

The results of the post-test scores indicated a substantial gain over the pre-test scores in all of the nine areas tested. A distribution of frequency for both pre-test and post-test scores was compiled. A chi-square procedure was used to test for significant differences. Statistically, the difference in frequency between the pre-test and post-test was significant at the .005 level in all nine areas.

Further analysis was obtained by comparing the post-test scores of the six elementary schools with those of the control group. The results of the tests are shown in Table 6.

TABLE 6
METROPOLITAN ACHIEVEMENT TESTS
GRADE 3

Test	Control Group N	Control Group Mean	USD 250 Post-Test N	USD 250 Post-Test Mean
Word Knowledge	26	3.8	248	3.8
Word Analysis	26	3.8	248	3.8
Reading	26	3.4	247	3.5
Spelling	26	3.6	249	3.4
Total Reading	26	3.7	247	3.6
Math Comp.	26	3.6	249	3.8
Math Conc.	26	4.0	249	3.8
Math Prob. Solving	26	3.7	248	3.4
Total Math	26	3.7	248	3.6

A null hypothesis that no real differences existed between the achievement of the six elementary schools of Unified School District No. 250 and the control group was assumed. The null hypothesis was retained through statistical analysis. Therefore, the conclusion is that there was no statistical significance between the score of the two groups.

This study through the Metropolitan Achievement Tests suggests that career education has neither enhanced or inhibited the traditional

learning process of the third grade students of Unified School District No. 250. The pre-test and post-test results indicate a substantial growth in all nine areas. In addition, the academic achievement of the third grade students of Unified School District No. 250 was comparable with the students of the parochial schools in the community.

EVALUATION IN GRADE 6

- Self Observation Scales. In this evaluation, the intermediate level of the Self Observation Scales measure seven dimensions of the students' self perception. Each scale is measured positively with high scores being most characteristic of the specific dimension measures. The scales' descriptions are as follows:

Scale I - Self Acceptance. Children with high scores view themselves positively and attribute to themselves qualities of happiness, importance, and general competence. They see themselves as being valued by peers, family, and teachers. Children with low scores see themselves as unhappy, lacking in general competence and of little importance to others.

Scale II - Self Security. Children with high scores report a high level of emotional confidence or stability. They feel that they are in reasonable control of the factors that affect their lives and spend little time worrying over possible troubles. Children with low scores on this scale worry a great deal. They are concerned that something bad may happen and report feelings of nervousness.

Scale III - Social Maturity. Children with high scores on this scale know how they are supposed to think and feel in a variety of social situations. They have learned the importance of such notions as "fair play", "sharing", "perserverance", "helpfulness", and "generosity". Children with low scores on this scale have not learned these notions and are likely to display behaviors that most adults

would characterize as selfish, inconsiderate, or immature.

Scale IV - Social Confidence. Children with high scores feel confident of their ability to relate successfully in social situations. They feel confident that they can make friends easily, and that they are valued and enjoyed by their friends. Children with low scores have difficulty making friends, do not feel valued by others and see other people as being more socially adept than themselves.

Scale V - School Affiliation. Children with high scores view school as a positive influence in their lives. They enjoy going to school, and they enjoy the activities associated with school. Children with low scores view school as an unhappy place to be. They do not enjoy most school-related activities and are negative about the importance of school in their lives.

Scale VI - Teacher Affiliation. Children with high scores like their teachers. They see the teacher as helpful, attentive, understanding and generous. Children with low scores see the teacher as arbitrary, inconsiderate of children, and/or as a source of emotional pain.

Scale VII - Peer Affiliation. Children with high scores consider their relationships with other children to be both of high quality and of considerable importance to them. They see themselves as approved of and valued by their peers. They like to be with other children. Children with low scores do not see their peer relationships as an asset. They see other children as unfriendly, they have few friends

and do not accept the responsibilities of friendship easily.

Approximately 210 students were randomly selected from all six of the elementary schools in Unified School District No. 250 for the tests. The sixth graders of Saint Marys, a parochial school which did not have a career education program, were used as the control group. The results of the analysis of the six elementary schools and the control group are shown in Tables 7 through 13.

TABLE 7
SOS SCALE I - SELF ACCEPTANCE
GRADE 6

School	N	Ave. Score	S. D.	APS	Difference
Lakeside	34	56.00	6.13	71.06	2.8
Westside	22	53.59	8.84	61.95	-6.31
Eugene Field	41	50.46	12.77	56.49	-11.77
Lincoln	46	51.87	10.89	59.13	-9.13
Nettles	46	55.65	6.93	69.61	1.35
Washington	21	52.10	9.18	59.38	-8.88
Saint Marys	23	55.13	7.12	68.26	**

TABLE 8
SOS SCALE II - SELF SECURITY
GRADE 6

School	N	Ave. Score	S.D.	APS	Difference
Lakeside	34	54.26	10.42	62.85	15.59
Westside	22	50.5	13.27	55.77	8.51
Eugene Field	41	47.63	12.69	46.34	-.92
Lincoln	46	52.43	10.45	57.46	10.20
Nettles	46	49.91	10.33	51.48	4.22
Washington	21	44.81	12.37	35.57	-11.69
Saint Marys	23	48.48	12.41	47.26	**

TABLE 9
SOS SCALE III - SOCIAL MATURITY
GRADE 6

School	N	Ave. Score	S. D.	APS	Difference
Lakeside	34	55.68	6.28	70.65	3.0
Westside	22	53.41	7.37	62.50	-5.15
Eugene Field	41	49.88	11.55	54.59	-13.36
Lincoln	46	52.78	8.07	61.26	-6.39
Nettles	46	55.33	4.5	68.96	1.31
Washington	21	50.38	5.57	51.29	-16.36
Saint Marys	23	55.09	6.65	67.65	**

TABLE 10
SOS SCALE IV - SOCIAL CONFIDENCE
GRADE 6

School	N	Ave. Score	S.D.	APS	Difference
Lakeside	34	57.50	7.0	74.29	-1.54
Westside	22	53.68	8.75	62.18	-13.65
Eugene Field	41	52.29	10.04	59.07	-16.76
Lincoln	46	54.26	7.37	64.13	-11.70
Nettles	46	57.35	6.58	74.15	-1.68
Washington	21	49.52	6.85	47.81	-28.02
Saint Marys	23	57.91	6.73	75.83	**

TABLE 11
SOS SCALE V - SCHOOL AFFILIATION
GRADE 6

School	N	Ave. Score	S. D.	APS	Difference
Lakeside	34	49.79	10.42	51.47	7.04
Westside	22	51.14	12.10	55.41	10.98
Eugene Field	41	50.93	10.36	53.90	9.47
Lincoln	46	50.50	10.98	52.22	7.79
Nettles	46	55.15	7.92	67.46	23.03
Washington	21	51.86	11.00	56.86	12.43
Saint Marys	23	48.09	8.23	44.43	**

TABLE 12
SOS SCALE VI - TEACHER AFFILIATION
GRADE 6

School	N	Ave. Score	S. D.	APS	Difference
Lakeside	34	52.59	8.37	61.59	-.11
Westside	22	48.45	12.29	51.00	-10.70
Eugene Field	41	51.44	9.40	58.07	-3.63
Lincoln	46	49.96	11.65	55.89	-5.81
Nettles	46	55.72	4.17	70.80	9.10
Washington	21	51.71	7.93	58.57	-3.13
Saint Marys	23	52.57	8.96	61.70	**

TABLE 13
SOS SCALE VII - PEER AFFILIATION
GRADE 6

School	N	Ave. Score	S. D.	APS	Difference
Lakeside	34	53.28	10.12	62.26	-.39
Westside	22	52.55	11.87	62.32	-.33
Eugene Field	41	47.98	13.47	50.17	-12.48
Lincoln	46	51.96	10.75	59.07	-3.58
Nettles	46	53.15	9.55	62.52	-.13
Washington	21	47.43	11.64	46.33	-16.32
Saint Marys	23	52.91	10.15	62.65	**

Out of the 42 possible comparisons (i.e. 6 schools x 7 scales), the sixth graders in Unified School District No. 250 exceeded the national average percentile of 50 by 38 times and the average percentile score of the control group by 16 times.

In the Self Acceptance scale, all six schools scored above the national norm, but all ranked below the control group except for Lakeside and Washington. The schools fared quite well in Self Security with the exception of Eugene Field and Washington. In the areas of Social Maturity and Social Confidence, there was a large range of variation in the performance of the schools. The control group ranked higher in the majority of cases. The students showed, a greater school affiliation than the control group but a lower teacher affiliation, except at Washington. The control group also ranked higher in peer affiliation.

METROPOLITAN ACHIEVEMENT TESTS

The Metropolitan Achievement Test scores of the sixth grade students were analyzed with (1) comparisons between pre-test and post-test scores and (2) comparisons between the post-test scores and those made by the control group. Randomly selected sixth graders of a parochial school which did not have career education served as the control group.

The pre-test was given in September 1975 and the post-test in March 1976. There are nine separate tests of academic achievement at the sixth grade level. These are described by the publishers in

the following manner:

1. Word Knowledge

   Identifying a synonym, an antonym, or a word from a given classification.

2. Reading

   Comprehending literal meanings, drawing inferences, identifying main ideas, and determining word meanings from context, in a paragraph-question format.

3. Language

   a. Study skills - Using common sources of information - dictionary, encyclopedia, index, etc.

   b. Part of Speech - Identifying the type of word needed to complete a sentence.

   c. Punctuation, Capitalization, and Usage - Identifying errors in written material according to the basic conventions of standard English.

4. Spelling

   Recognizing and rewriting incorrectly spelled words.

5. Mathematics Computation

   Using the arithmetic processes with whole numbers and fractions.

6. Mathematics Concepts

   Understanding important mathematical principles and relationships including laws and properties of number systems, geometry, measurement, place value, inequalities, sets and estimation.

7. Mathematics Problem Solving

   Applying arithmetic processes to solving everyday problems, using measurement concepts, reading charts, and using number sentences.

8. Science

   Using scientific concepts, facts, and skills from such content areas as plant and animal biology, health and safety, chemistry, magnetism and electricity, energy and machines, sound, light, heat, weather and climate, earth science, astronomy, and history and methodology of science.

9. Social Studies

   a. Identifying important concepts, names, terms, facts, trends, and generalizations in U.S. and world history and geography.

   b. Using maps and charts to get specific information and make generalizations.

In addition to results of the above nine areas, a weighted average of the first four areas is given under the category of Total Reading and of the mathematics areas under the category of Total Mathematics. The outcome of this pre-test and post-test are shown in Table 14. Grade equivalent scores of 6.0 and 6.5 were to be expected for each test. The students did quite well as it can be seen than the grade equivalent scores are consistently above 6.5 mean score.

TABLE 14
METROPOLITAN ACHIEVEMENT TESTS
GRADE 6

Test	Pre-Test Sept. 1975 N	Mean	Post-Test March 1976 N	Mean	D	P
Word Knowledge	243	6.0	271	6.7	.7	.005
Reading	243	6.0	271	6.5	.5	.005
Language	240	6.2	270	6.7	.5	.005
Spelling	241	5.6	271	7.0	1.4	.005
Total Reading	243	6.	268	6.7	.5	.005
Math Comp.	242	5.7	270	7.1	1.4	.005
Math Conc.	242	5.9	267	6.9	1.0	.005
Math Prob. Sol.	242	5.6	269	6.8	1.2	.005
Total Math	242	5.7	265	6.8	1.1	.005
Science	242	5.7	273	6.5	.8	.005
Social Studies	242	5.8	270	6.6	.8	.005

D is the difference between pre-test and post-test mean scores.

P is probability that the differences in distribution of scores on this test are significant.

Further analysis was obtained by comparing the post-test scores of the six elementary schools with those of the control group. The results of the tests are shown in Table 15.

TABLE 15
METROPOLITAN ACHIEVEMENT TESTS
GRADE 6

Test	Control Group Post-Test N	Mea	USD 250 All Schools Post-Test N	Mean
Word Knowledge	30	6.9	271	6.7
Reading	30	6.9	271	6.5
Language	30	6.9	270	6.7
Spelling	30	7.0	271	7.0
Total Reading	30	7.2	268	6.7
Math Comp.	30	6.6	270	7.1
Math Conc.	30	6.9	267	6.9
Math Prob. Sol.	30	6.5	269	6.8
Total Math	30	6.4	265	6.8
Science	30	6.8	273	6.5
Social Studies	30	5.7	270	6.6

A null hypothesis that no real difference existed between the achievement of the six grade students of Unified School District No. 250 and the control group was assumed. The null hypothesis was retained through statistical analysis. Therefore, the conclusion is that there was no statistical significance between the scores of the two groups.

This study through the Metropolitan Achievement Tests suggests that career education has neither enhanced or inhibited the traditional learning process of the third grade students of Unified School District No. 250. The pre-test and post-test results indicate a substantial growth in all eleven areas. The achievement of the sixth graders was comparable with the students of the parochial schools in the community.

EVALUATION IN GRADE 8

Career Maturity Inventory. Parts one and two of this test were administered to 22 ninth graders at the Lakeside Junior High School and to 29 ninth graders at Calgon High School. Calgon, a parochial school which does not have a career education program, served as the control group.

Part one of the Career Maturity Inventory was designed to measure the knowledge of self and part two to measure the knowledge of careers. The results of these tests are shown in Table 16.

TABLE 16
CAREER MATURITY INVENTORY
GRADE 8

	Calgon		Lakeside	
	N	Mean	N	Mean
Part One	29	67.1	22	74.7
Part Two	29	73.5	22	83.8

The mean scores are in percentiles. The scores are standardized to a national norm of 50. In both part one and part two the mean score of the students of Unified School District No. 250 and the control group were higher than the national norm.

EVALUATION OF CAREER MATHEMATICS

The students in Career Math classes were given a pre-test and a post-test to measure their basic mathematics skills. Form A and B of ABLE test, a standardized test covering 30 areas of math were used for the measurement. National norms in terms of grade equivalencies are available for comparisons.

In the Career Mathematics classes, the students explore the various ways in which mathematics are related to different occupations. The classes are often aided by resource persons who discuss the use of mathematics in their individual professions. The Career Mathematics classes are one division of the career education program. The

results of the mean scores of three sections on the pre-test and post-test are given in Table 17.

TABLE 17
CAREER MATHEMATICS CLASS
GRADE 12

Group	Pre-Test August 1975 N	Pre-Test August 1975 Mean	Post-Test January 1976 N	Post-Test January 1976 Mean
1	21	15.29	19	18.25
2	21	15.43	20	20.25
3	20	17.55	17	21.64

As indicated by the results, the Career Mathematics program did have a positive effect on the performance of the students participating in the program.

CAREER EDUCATION EVALUATION

UNIFIED SCHOOL ISTRICTS NO. 253

EMPORIA, KANSAS

STUDENTS EVALUATION
EMPORIA, KANSAS

INTRODUCTION

In December of 1972, the Kansas State Board of Education, through its Division of Vocational Education, submitted to the U.S. Commissioner of Education, a proposal entitled, "A Consortium Approach to Exemplary Career Education Program Development Involving Two Unified School Districts and Two Teacher Education Institutions."

The two unified school districts selected for this project were Emporia, Kansas, in the East Central part of Kansas, and Pittsburg, Kansas, in the Southeast section of Kansas. The communities are similar in size, school organization and enrollment.

Each of these unified school districts has a four-year state college with a substantial commitment to teacher education. These colleges are the Emporia Kansas State College and the Kansas State College of Pittsburg. These two colleges supply approximately 30% of the elementary and secondary teachers in the state.

This exemplary career education project was designed to accomplish several broad, general purposes. It was intended that:

1. The involvement of the teacher training institutions in a close working relationship with career education programs of the unified school districts would provide the colleges with relevant information upon which to base curricular changes needed to prepare future teachers of career education. The rapid expansion of career education in Kansas has created a problem of providing qualified personnel for implementing these programs.

2. The exemplary career education program would extend career education opportunities to an approximately 7,500 additional students in Kansas.

3. The exemplary career education project would generate additional occupational and career education materials for dissemination to teachers and students throughout the state and develop a system for delivery of these materials.

State level coordination was provided by the Director of Exemplary and Special Needs Programs in the Division of Vocational Education. Local coordination was provided by a director in each of the sponsoring unified school districts. In addition, a five-man task force at the state level was established to monitor the project activities and to act as an advisory council for the total project. The task force was composed of representatives from vocational education, guidance, curriculum, EPDA, and research.

Each of the two unified school districts submitted a proposal for its portion of the career education program over a three-year period. Each of the two teacher education institutions submitted a proposal for their activities on a one-year basis. Because of the nature of EPDA

appropriations, it was planned that the teacher education proposals would be re-studied and renewed on an annual basis. These four proposals were combined at the state level into a single proposal to be submitted to the U.S. Commissioner of Education.

The proposal requested $395,223 for the two unified school districts, from Part D discretionary funds. This amount was for the three-year period from July 1, 1973 to June 30, 1976.

The Approach to Evaluation. By law, exemplary programs funded from vocational education research funds must have an annual evaluation performed by a third party evaluator independent of any relationship to the project.

In December 1971, the Division of Vocational and Technical Education in the U.S. Office of Education issued a program memorandum which stated that state advisory councils for vocational education as independent and autonomous agencies, were acceptable as third party evaluators. Pursuant to the memorandum, the Division of Vocational Education in Kansas requested the State Advisory Council for Vocational Education to perform the annual third party evaluation of the exemplary career education programs in the Pittsburg and Emporia unified school districts.

The Philosophy of Evaluation. The Kansas Advisory Council for Vocational Education believes that the purpose of any evaluation should be the improvement of the program. Most of the information needed for the evaluation is the same information that would be needed for

an internal evaluation by the local district or for periodic reports to the board of education. The evaluation then, should be a planned, integral part of the on-going exemplary program with the annual evaluation providing a synthesis of the evaluation activities that have occurred throughout the year.

Evaluation Procedures. The design of this evaluation was based largely on the Handbook for the Evaluation of Career Education Programs issued by the Bureau of Occupational and Adult Education, U.S. Office of Education. This document dealt primarily with the product evaluation aspect of the report.

In addition, another aspect of valuation was considered necessary. The process evaluation contains a description of the activities designed to extend the career education program or to involve more people in it, and describes the activities designed to improve the program.

While the product evaluation of what is happening to students is considered the most important part of the report, the process evaluation was considered necessary to adequately describe the activities of the staff used to set the tone of the project.

Data for the process evaluations were gathered from reports of the State Department of Education and local schools, interviews with the career education staff and teachers, and school visitations.

Data for the product evaluation were gathered from test results and a faculty questionnaire. The third party evaluator designed the evaluation and analyzed the results. The administration of selected

tests was the responsibility of the local school districts. Tests were selected from those recommended in the Handbook for the Evaluation of Career Education Programs.

Organization of the Report. This evaluation report was designed to accomplish two purposes. The first and primary purpose was to provide a comprehensive evaluation of the exemplary career education program. As a secondary purpose, it was intended to disseminate information about the program to others who were interested in career education.

To accomplish these two purposes, the first section was used to provide background and introductory information from the evaluation. The second section contains abstracts of the characteristics of the community and school system. The third section is a description of the purpose, philosophy and objectives of the career education program. The fourth section deals with process evaluation. The fifth section deals with product evaluation.

DESCRIPTION OF THE COMMUNITY, SCHOOL AND EXEMPLARY PROGRAM

The first annual report provided detailed descriptions of the community and school system. Assuming that this data changes slowly, this material has been abstracted in this, the third annual report. The following is a brief overview of the Emporia community and school system.

Demographic Data. Emporia, Kansas is in Lyon County and located between Kansas City and Wichita on the Kansas Turnpike and Santa Fe Railway.

The 1972 Kansas Statistical Abstract listed the population of Emporia at 20,982 persons. Emporia is the Lyon County seat and includes approximately 65% of the county population.

The population has increased steadily over the past 50 years and this growth has accelerated in the past decade. The percentage change in population between 1950 and 1960 was 16.1%. The percentage change between 1960 and 1970 was 28.2%.

Male residents of Emporia have, on the average, completed 12.6 years of education, while female residents have completed 12.5 years. This is slightly higher than the state-wide average of 12.3 for both sexes.

The population of Emporia is 96% white with Negroes the predominate non-white group. Approximately 19.5% of the population is either academically, economically or culturally disadvantaged. Approximately 9.6% of the population has some type of mental or physical handicap.

The occupational profile for Emporia shows significantly higher percentages of professional, clerical and service workers and significantly lower percentages of craftsman, farmers and farm workers than is found in the state-wide occupational profile.

In 1970, the three major industries in Emporia were services, retail trade and manufacturing. The industrial profile shows subs-

tantial growth in all industries except those involved in extractive activites and transportation, communications, and utilities.

The population of Emporia is slightly less affluent than the population throughout Kansas. The median income per family in Emporia was $8,369.00. The median income throughout Kansas was $8,693.00.

Emporia has a fairly low unemployment rate when compared with state and national data. In 1970, the unemployment rate was approximately half of the national average.

Educational Data. In 1976, Unified School District No. 253, Emporia, Kansas, was organized on a K-6-2-4 basis. The attendance centers, levels served, enrollment and student/faculty ratio are shown in the following table:

TABLE 1

School	Level Served	Enrollment	Student/Faculty Ratio
Senior High	9-12	1315	8/1
Middle School	7-8	685	15/1
Elementary (6)	K-6	1847	21/1

There is also an area vocational - technical school which offers a variety of occupational programs. This is a separate attendance center with its own campus.

DESCRIPTION OF THE PROGRAM

Purpose. This program has a dual purpose. First, it was intended to initiate career education to U.S.D. No. 253 with the hope that eventually the career education concept would permeate all activities and curricula of the school. To this end, the development of policies, procedures, instructional materials and the orientation of the faculty to career education concepts through in-service education was emphasized.

Secondary, it was intended that the close involvement of the local teacher education institution in this program of career education would strengthen its capability to provide realistic experiences for the pre-service and in-service education of the future career education teachers.

Philosophy. Experiences were designed to increase the self awareness of such students; to develop in each student favorable attitudes toward the personal, social and economic significance of work and to assist each student in developing and practicing appropriate career decision-making skills.

At the elementary school level, experiences were designed to increase the student's awareness of his self as an individual and of a broad range of options open to him in the world of work.

Experiences at the middle school level were designed to provide career orientation and meaningful exploratory experiences for students.

At the senior high level and at the area vocational-technical school,

emphasis was on the development of job skills in a wide variety of occupational areas, with special emphasis on the utilization of work experience and/or cooperative education opportunities.

A goal of this career education program was to infuse career education, self-awareness, and economic education into the total curriculum.

A primary thrust of this career education program was to prepare students for a successful life of work by increasing their options for occupational choice, by eliminating barriers - real and imagined to attaining job skills, and by enhancing learning achievement in all subject areas and at all levels of education. Career Education emphasized critical decision points at which students must be prepared and equipped to decide whether to pursue a job, seek further education, or choose some combination of both.

The ultimate out-come of the program was to be the placement of student in (1) a job, (2) a post-secondary educational program or (3) a baccalaureate program.

Objectives. Specific objectives to be achieved in this program are:

1. To develop in each student, a greater self awareness and to relate his own personal characteristics to appropriate career, leisure time, personal, economic and educational activities.
2. To teach each student, proper decision-making skills with regard to career choice.

3. To develop favorable attitudes about the personal, social and economic significance of work.
4. To make each student aware of the broad range of career options open to him in the world of work.
5. To provide each student with meaningful exploratory and career orientation activities.
6. To provide guidance and counseling in career selection and job placement.
7. To provide appropriate work and/or work-related experience for students who plan to enter the job market after high school completion.
8. To provide students who plan to enter post-secondary vocational or technical training with appropriate preparatory experiences.
9. To provide appropriate experiences for those students who plan to pursue a baccalaureate degree.
10. To develop greater competencies among the staff and faculty to help students achieve the objectives of career education.
11. To involve the community in school activities through expanded use of community resources in the career education activities.
12. To improve and expand the guidance function and to diffuse it throughout the all school activities.
13. To eventually integrate career education into all aspects of the school program.

14. To develop in students a greater knowledge of practical consumer economics.

15. To reduce the drop-out and absentee rate among students.

Procedures. In an effort to achieve the objectives of the program, the following points were emphasized.

1. Particular emphasis will be placed at the secondary level in order to involve all teachers and counselors in the program.

2. A wide variety of community resources and resource persons will be identified.

3. Within the district a comprehensive program of information dissemination regarding the program will be started.

4. The career education staff funded by this project will be purposely limited so that the major responsibility for the career education program falls on the shoulders of the entire staff. Special emphasis will be placed on helping all teachers understand how career education can fit into their programs.

5. Time will be alloted and appropriate activities will be provided for all personnel to become involved in the program.

6. Student teachers placed in the classrooms will have prior training in career education through the programs of the two colleges involved in the project.

7. Special effort will be made to gain acceptance of career education concepts by secondary school teachers and counselors.

8. An adequate number of seminars and intensive study experiences will be provided and available to all staff members.

9. An intensive campaign will be instituted to develop various kinds of work and work-related employment and experiences for students in the community.

10. An emphasis will be placed upon the development of career education resource materials within the district.

11. Counselors will be fully included in the program, both as receivers of training and in providing leadership for staff members in career education.

PROCESS EVALUATION

The material contained in this section is intended to describe the activities of Unified School District No. 253 which were used to implement the objectives of the exemplary career education program.

The first step in program development in the Emporia component of the project was to provide staff in-service. Teacher in-service included two one-week summer workshops involving approximately eighty teachers from U.S.D. 253 and the private school in Emporia. The objectives of the workshops were: (1) to orient staff on the concept of Career Education as outlined by the State Department of Education, (2) to present programs across the state as they existed at that time, (3) to convey the feelings of business and community toward career development, and (4) to create interest in developing a working career education program that would fit the particular situation in Emporia.

Participation in in-service sessions for the 1975 - 1976 school year was:

100% Elementary K-6
60% Middle School 7-8
24% High School 9-12

In the 1975 - 1976 school year in-service was held in three one-week sessions; one week at each level during the summer. Also at the elementary level, three six-hour days of in-service were held for each grade level, K-6. These sessions included special reading teachers from all schools.

In contrast to the in-service held during the first year of the project, the in-service for the 197 - 1976 school year was directed toward specific elements within the school district. At the elementary level entire grade levels worked together developing curriculum within a specific subject area. At the Middle School level teachers worked in teams to develop interdisciplinary units which could be implemented within the team concept at that school.

An important part of the project from the beginning was communication throughout the community which includes the school community and the business community. A Career Education staff member attended each school during in-service days for a meeting with each entire staff. Items from various commercial companies were collected for view and appraisal by teachers prior to purchase of those materials. An inventory was also conducted of existing materials

in the school district that were Career Education related. Based upon the inventory, other available commercial materials were reviewed and evaluated by staff members.

After ordering materials on approval from various commercial companies, which were reviewed and critiqued by administration and staff, materials were chosen and order for each grade level. During the first two years of the project, new materials were housed at the Career Education Center and were distributed to the buildings as requested by teachers. All new materials were routed to the buildings for teachers to become familiar with them. Various audio-visual equipment was purchased for use i . the buildings and was treated in the same manner. Also, all materials were listed in the staff newsletter which was circulated to all teachers for their referral. A complete list of materials was also available in each school.

The materials at the Senior High level were the exception. These materials were available in a Career Education center located in the Library. The Career Center within the school worked very well. During the second year of the project the Career Center arrangement was also adapted at the Junior High level. During the third year the elementary materials were arranged the same way. Through the cooperation of the elementary librarians, elementary materials that were housed in a particular library, were available to all schools. Materials requested could be delivered to any school in the district with one day prior notice.

An advisory committe was formed including representatives from minority groups, women, parents, Chamber of Commerce existing advisory committee members, and the area vocational school staff. During the first year of the project the advisory committee was utilized as a group advisory committee. Following the formation of the advisory committee, members of business and industry were contacted and placed in a resource file for placement of job observation students, job experience students, classroom resource people, and sources for field trips. A community resource guide was compiled and distributed to each teacher in U.S.D. 253.

During the second project yea , the advisory committee functioned individually. The members of the committee were contacted on an individual basis whenever an activity or concern was related to their section of the community. The members of the committee were also invited to express their concerns and any ideas that they had to the Career Education staff. The primary reason for the original committee not functioning as a group was due to the fact that an Instructional Improvement Committee which was formed for the entire district included these representatives. The Instructional Improvement Committee for U.S.D. 253 was designed to determine goals and objectives for improvement of the entire curriculum.

Changes in methods in U.S.D. 253 included extensive involvement of the community as resources both in the classroom and on fieldtrip sites. Team and unit teaching allowed more flexible scheduling for out of the class activities.

Some changes in the school structure at the Junior High and Senior High School level created some advantages for the Career Education project during the second year. Lowther Middle School changed from a 7-8-9 junior high school to a 7-8 middle school. That change created better flexibility for career experiences. A team arrangement at the Middle School level caused classes to meet in four-hour blocks rather than 50-minute periods. At Emporia High School due to a new building more flexibility was possible. A teacher advisor plan was implemented. Each teacher advised twenty students on enrollment, program, etc. The teacher advisor plan also released counselors as enrollment people t· function as teacher advisors and to work with individual students on a more regular basis.

At the elementary level, teachers adopted a skill approach to teaching. Using reading as the pilot area, teachers identified skills to be taught at each grade level. Along with identification of skills, teachers identified activities and methods with which to teach each skill.

The elementary schools in Emporia each designed and compiled a plan for Career Education as an in-service project. The plans for Career Education in some cases acted as a curriculum guide or served as a curriculum guide for spiraling curriculum K-6.

Projects were developed to help create more cooperation and communication between Emporia Senior High School staff and the Flint Hills Area Vocational Technical School staff. Since a new

senior high school for the Emporia school district was built directly across the street from the Area school, there were mutual advantages.

Some examples of this are: (1) the sharing of K-View materials between the two schools (2) each instructor at the Flint Hills Area Vocational Technical School prepared a slide presentation to be placed in the senior high school media center for use by teachers and students. This is only one use of the presentations. They were also used for community information systems. (3) A newspaper advertising unit was developed by Senior High School and Flint Hills Area Vocational Technical school teachers. Classes and departments involved were: language arts, art, consumer edu ation, distributive education, and business education. At the end of the advertising units the students prepared advertising mats for local businesses through the cooperation of the local newspaper. A special section of the newspaper included articles written by students as well as the advertising done by students which made the project self-supporting.

Smorgasbord and shadow days are ways of involving the community and of providing a choice by high school students. At Emporia High School regular classes are suspended periodically. Special interest classes are designed prior to the Smorgasbord day and students sign up in advance. The special interest classes may, or may not include outside references. Shadow days are arranged periodically for students who have an interest in observing someone in their profession. During a shadow experience a student will accompany a person in a career for a day or part of a day.

Career Days were regularly held at each of the elementary schools during the three year period. Following appropriate activities within the classroom, community representatives were invited to the buildings to discuss their careers and provide related activities. Following a Career Day, students representing interest in a particular career would meet together to discuss (1) their interests, (2) what they had found out about the careers, (3) advantages and disadvantages of chosen careers for the day. Many teachers had students make up lists of questions concerning the careers being discussed.

A typical Career Day was held at Walnut Elementary School. The approach was to identify people from the community who could relate to each of the curriculum areas. Two people were identified for each of the following: art, physical education, science, social studies, math, language arts, and music. The criteria was for the resource persons to relate their career to the subject area by presenting hands-on activities that would show examples of how the specific area of knowledge was useful in their profession.

A materials development lab was made available to all elementary and middle school teachers for a period of four weeks during the second and third year of the project. Various materials and equipment were made available with a materials specialist on hand to assist with machines and materials. This was a coordinated effort between the

district and the Career Education project. Approximately 80% of the elementary teaching staff utilized this lab during the four-week period. One result of this project was a number of Career games which were taken back to the classroom for use.

An exchange of materials and equipment was arranged with the Learning Skills Center at the Flint Hills Area Vocational Technical School. The materials and equipment from the Learning Center were used throughout the Unified School District and were made available to teachers through the Career Education Center.

A summer program was held for eighth grade students at Flint Hills Area Vocational Technical School. Exploration activities were planned in the areas of automobile mechanics, welding, carpentry, and distributive education. Twenty students were taken by the instructors at the Area Vocational Technical School and provided with hands-on experience both at the school and in the industrial setting. Each of the students completed the summer experience with the product that they had made.

A World of Manufacturing Class was offered at Emporia Senior High School during 1976. The class covers many areas of the processes used in making a product as well as many of the careers in industry. An outline of the project is shown in Appendix B. Many ideas for the class were adapted for the ninth grade level from The World of Manufacturing from McKnight Publishing Company that were originally designed for seventh and eighth grade students. The processes involved

in manufacturing a product are emphasized with hands-on experience.

Through a career-related project in the Biology and Science department at Emporia Senior High School, the use of eighty acres on John Redmond Reservoir was secured for use in science and biology projects. Through the cooperation of the Federal Wildlife Protection Agency, many career related experiences are being provided.

PRODUCT EVALUATION

A variety of standardized tests were administered to students in Unified School District No. 253 to assess their achievement of objectives set forth in the career education program. The Student Attitude Survey, the Career Know edge Test, and the Career Maturity Inventory were used as an indication of the extent to which certain objectives of career education were achieved. While it may be assumed that the career education program was a contributing factor in the achievement of educational objectives, it is not feasible to accurately determine the contribution of any one factor in the career education program.

In an attempt to provide unbiased results, the tests were administered to a random sampling of third, sixth, eighth and twelfth graders. The subjects were chosen from schools which were not used as a source of data in the 1975 career education evaluation. To form the random sample of third graders, every fifth student from the available schools was selected until a group of fifty subjects was formed. The same procedure was followed to collect the sample of fifty sixth graders.

The procedure used to collect the sample groups for eighth and twelfth graders was more involved. First, every fifth 8th grade teacher and every fifth 12th grade teacher was selected from the school directory. Then the testers went to the selected teachers and picked every fifth student that walked into their classroom until a sample of fifty 8th graders or fifty 12th graders was formed.

Elementary Grades 3 and 6. The Student Attitude Survey (SAS), is a non-verbal picture test designed to assess student attitudes toward self and others, and toward school and work. These attitude areas are the ones that seem to be most critical in education evaluation and career education. Form A and Form C w s administered to a random sample of third graders while Form B and Form D was administered to the sample of sixth graders.

Form A consists of 48 pictures. The student marks those pictures with which he can identify. Pictures 1-24 make up the Self Index and pictures 25-48 make up the Other Index. The Personal Index is the sum of scores from the Self and Other Index. The score is determined by counting the number of pictures marked correctly.

Form A provides three indices of attitudes. The following descriptions are furnished by the test publishers, Evaluative Research Associates of St. Louis, Missouri.

Self Index - A child obtaining a high score feels that he/she is loved, enjoys playing with others and by himself, gets approval of

others and is generally happy. A low score indicates the child feels like he/she is often in trouble, unhealthy and unattractive, disapproved of by others and generally unhappy.

Other Index - A high score indicates that the child enjoys working and playing with others, likes being with other children or adults, enjoys meeting new people and helping others. A low score means that the child is a loner; does not care to meet or be with others, and enjoys fighting and hurting others.

Personal Index - A high score indicates that the child feels positive about himself and others. A low score indicates that the child sees himself and others negatively.

Fifty third grade students randomly selected from four elementary schools were tested. The following data were obtained:

TABLE 2
ATTITUDES TOWARD SELF

Score	0-5	6-12	13-20	21-28	29-34
Attitude	Highly Negative	Negative	Neutral	Positive	Highly Positive
N	0	0	2	17	31
%	0	0	4%	34%	62%

This is a criterion based test and the test publisher emphasizes that the criterion be established at the local level. Because the test

was designed to "top out" in the early elementary grades, the criterion for satisfactory achievement was arbitrarily set at a score of 25. This is approximately the lower boundary of the upper quantile. All but six students were above this criterion indicating the group was very positive in their attitude toward self.

TABLE 3
ATTITUDES TOWARD OTHERS

Score	0-5	6-12	13-20	21-28	29-34
Attitude	Highly Negative	Negative	Neutral	Positive	Highly Positive
N	0	0	0	8	42
%	0	0	0	16%	84%

This group was very positive in their attitude toward others. Only one student scored below the arbitrarily established criterion score of 25.

Form B consists of thirty four - choice multiple choice items which assess attitudes toward self and others. Six scales can be generated from the thirty items on this test. The following description is supplied by the test publisher.

Postive Self Index - An individual obtaining a high score on this scale sees him/herself as having few problems, generally happy,

liked and trusted by others, as good as other people. An individual obtaining a low score on this scale would reject these positive attitude traits.

Negative Self Index - An individual obtaining a low score on this scale would tend to see him/herself as having a lot of problems, not able to do things right, worrying about making mistakes, dissatisfied with the way things are, and liking to be more like other people. A high score on this scale would indicate a rejection of these negative attitudes.

Postive Other Index - The individual obtaining a high score on this scale tends to feel postively towards others, likes to be with other people and help them, sees most of his/her friends as being about like he/she is, and in general just tends to like people. A low score on this scale would indicate a rejection of these positive attitudes.

Negative Other Index - The individual obtaining a low score on this scale tends to want to dominate others, sees others as men, selfish, and not too bright, feels that you can't trust others, rather be alone and doesn't really want any friends, and in general does not seem to care for most people. A high score on this scale would indicate a rejection of these attitudes.

Postive Personal Index - A high score on this scale reflects both positive self and other attitudes. A low score on this scale would indicate a rejection of these positive attitudes. The Positive Personal

Index score is the sum of the Positive Self Index and the Positive Other Index scores.

Negative Fersonal Index - A low score on this scale indicates that the individual has negative attitudes toward him/herself and toward others. A high score on this scale would indicate a rejection of those negative attitudes. The Negative Personal Index is the sum of the scores for the Negative Self Index and the Negative Other Index.

Fifty 6th grade students randomly selected from four elementary schools were tested. The following data were obtained:

TABLE 4
POSITIVE SELF INDEX

Score	0-4	5-8	9-12	13-16	17-18
Attitude	Highly Negative	Negative	Neutral	Positive	Highly Postive
N	0	0	11	24	15
%	0	0	22%	48%	30%

This group was generally positive in thei~ attitudes towards self.

TABLE 5
NEGATIVE SELF INDEX

Score	0-5	6-11	12-17	18-23	24-27
Attitude	Highly Negative	Negative	Neutral	Positive	Highly Positive
N	0	4	14	24	8
%	0	8%	28%	48%	16%

This group was generally positive in their attitude towards self, with only eight percent indicating negative attitudes.

TABLE 6
POSITIVE OTHER INDEX

Score	0-4	5-8	9-12	13-16	17-18
Attitude	Highly Negative	Negative	Neutral	Positive	Highly Positive
N	0	0	11	30	9
%	0	0	22%	60%	18%

This group was generally positive in their attitudes towards others.

TABLE 7
NEGATIVE OTHER INDEX

Score	0-5	6-11	12-17	18-23	24-27
Attitude	Highly Negative	Negative	Neutral	Positive	Highly Positive
N	0	1	13	25	11
%	0	27%	26%	50%	22%

Form C consists of 24 pictures, each followed by three faces; a happy face, a neutral face and a frowning face. The student marks the face which most accurately describes his feelings as he looks at the picture. Form C provides two indices of student attitudes. The

following description is supplied by the test publisher.

School Index - A high score indicates that the child enjoys school and school related activities.

Work Index - A high score indicates that the child likes doing jobs often expected of children and youth, such as making the bed, dusting and cleaning. A low score indicates that the child does not enjoy doing these jobs.

Fifty third grade students and fifty eighth grade students randomly selected from four elementary schools were tested. The following data were obtained:

TABLE 8
ATTITUDES TOWARD SCHOOL - 3RD GRADE

Score	0-3	4-9	10-15	16-21	22-24
Attitudes	Highly Negative	Negative	Neutral	Positive	Highly Positive
N	0	1	21	25	3
%	0	2%	42%	50%	6%

TABLE 9
ATTITUDE TOWARD WORK - 3RD GRADE

Score	0-3	4-9	10-15	16-21	22-24
Attitude	Highly Negative	Negative	Neutral	Positive	Highly Positive
N	0	0	26	14	10
%	0	0	52%	28%	20%

TABLE 10
ATTITUDE TOWARD SCHOOL - 6TH GRADE

Score	0-3	4-9	10-15	16-21	22-24
Attitude	Highly Negative	Negative	Neutral	Positive	Highly Positive
N	0	2	29	16	3
%	0	4%	58%	32%	6%

TABLE 11
ATTITUDE TOWARD WORK - 6TH GRADE

Score	0-3	4-9	10-15	16-21	22-24
Attitude	Highly Negative	Negative	Neutral	Positive	Highly Positive
N	0	4	28	16	2
%	0	8%	56%	32%	4%

Administered in conjunction with the Student Attitude Survey was the Career Knowledge Test (CK). The CK is a non-verbal, picture test designed to be used with students in kindergarten through grade three, older students with reading or language problems and special education students. The test of Career Knowledge published by the Evaluative Research Associates of St. Louis was used to test the achievement of career information.

The test consists of three subtests containing ten items each. Part one deals with occupational similarities and assesses the students ability to match occupations according to those most similar. Part two deals with occupational differences and assesses the students ability to match occupations which are least similar. Part three measures the students ability to identify tests used in selected occupations.

This is a criterion based test and the publisher suggests that this criterion be established at the local level so as to reflect local differences.

The maximum score on this test is thirty points.

The test was administered to fifty 6th grade students and fifty 3rd grade students randomly selected from four elementary schools. The following scores were obtained and translated into percentiles.

TABLE 12
CAREER KNOWLEDGE TEST - 3RD GRADE

Score	23	24	25	26	27	28	29	30
% correct	76%	80%	83%	86%	90%	93%	97%	100%
N	2	2	5	5	8	14	5	9
%	4%	4%	10%	10%	16%	28%	10%	18%

TABLE 13
CAREER KNOWLEDGE TEST - 6TH GRADE

Score	23	24	25	26	27	28	29	30
% correct	76%	80%	83%	86%	90%	93%	97%	100%
N	0	0	0	0	0	0	22	28
%	0	0	0	0	0	0	44%	56%

All fifty of the sixth graders scored above the 90th percentile.

The high scores made by sixth graders on the Career Knowledge tests renders this instrument somewhat suspect. While students

showed a commendable level of career knowledge, the test does not appear rigorous enough to discriminate between various levels of achievement.

Secondary Grades 8 and 12. Parts 1, 2, 3, 4, and 5 and the Attitude Scale of the Competency Test in the Career Maturity Inventory (CMI) were administered to a random sample of eighth and twelfth graders.

The following descriptions are furnished by the test publishers, McGraw Hill, Inc.

Part 1 - This test is designed to test the self appraisal of the student.

Part 2 - This test is designed to measure occupational knowledge.

Part 3 - This test is designed to measure the student's ability to select a goal or choose a job.

Part 4 - This test measures the student's ability to plan or look ahead.

Part 5 - This test is designed to assess the student's ability to do problem solving.

Attitude Scale - the purpose is to elicit the feelings, the subjective reactions and the dispositions that the individual has toward making a career choice and entering the work world. More specifically, it surveys five additional areas which are:

1. Involvement in the career choice problems.
2. Orientation toward work.

3. Independence in decision making.

4. Preference for career choice factors.

5. Conceptions of the career choice process.

The test publisher provided a local percentile rank for the raw scores of the sample of eighth graders. These percentiles represent the rank of the average of the eighth graders in the local distribution of the examinees.

TABLE 14

	PART I	PART 2	PART 3
N	50	50	50
Mean	10.2	13.0	10.5
SD	3.93	4.40	3.54
Local Percentile Rank	51	52	50

	PART 4	PART 5	ATTITUDE SCALE
N	50	50	50
Mean	11.9	7.5	32
SD	4.61	3.36	5.30
Local Percentile Rank	50	50	49

When comparing the eighth graders scores to the local distribution of scores, the eighth graders from U.S.D. 253 rank average or slightly above average on all parts of the test except the Attitude Scale.

The test publisher also provided means and standard deviations for a sample of 2258 twelfth graders throughout the country. Comparisons were made between the scores of the twelfth grade students in Unified School District No. 253 and this test group. These comparisons showed the following data:

TABLE 15
PART 1

	U.S.D. 253 12th graders	CMI Data 12th graders
N	50	218
Mean	13.8	14.15
SD	3.54	3.48

On this test the twelfth graders fell slightly below the mean of the control group. Statistically this difference could be attributed to chance.

TABLE 15
PART 2

	U.S.D. 253 12th graders	CMI Data 12th graders
N	50	214
Mean	16.8	14.43
SD	2.85	4.67

On this test of occupational knowledge, the U.S.D. 253 twelfth graders outscored the national test group enough to be significant at the .001 level.

TABLE 15
PART 3

	U.S.D. 253 12th graders	CMI Data 12th graders
N	50	206
Mean	14.1	12.9
SD	3.09	5.43

The twelfth graders outscored the national test group enough to be significant at the .001 level.

TABLE 15
PART 4

	U.S.D. 253 12th graders	CMI Data 12th graders
N	50	215
Mean	14.6	11.89
SD	3.46	5.59

The twelfth graders outscored the national test group enough to be statistically significant at the .001 level.

TABLE 15
PART 5

	U.S.D. 253 12th graders	CMI Data 12th graders
N	50	194
Mean	10.8	9.50
SD	2.75	4.45

The twelfth graders outscored the national test group and the difference was sufficient to be significant at the .001 level.

TABLE 15
ATTITUDE SCALE

	U.S.D. 253 12th graders	CMI Data 12th graders
N	50	2258
Mean	35.7	37.23
SD	4.98	5.19

The Unified School District twelfth graders scored slightly below the mean of the control group. The difference was significant at a fairly low level of confidence.

These data indicate that the scores of twelfth graders in Unified School District No. 253 were significantly higher in occupational knowledge, goal selection, career planning, and problem solving. Their scores were slightly lower in self appraisal and attitudes toward career choice.

CONCLUSION

The general purposes of the exemplary career education program were:

A. Involvement of teacher training institutions with the unified school district's career education program in order to gather information needed to provide realistic experiences for in-service education of

future career education teachers.

B. Involve the community in school activities.

C. Generate additional occupational and career education materials for the use of teachers and students.

D. Extend career knowledge opportunities to more students in Kansas.

To a great extent, each of the above mentioned goals was realized through the implementation of the career education program.

While it is difficult to determine the overall effect of the exemplary program in terms of improvement of teaching methods in the teacher training institutions, it can be assumed that information generated by the program was beneficial to these institutions.

The use of community resources was expanded to increase community involvement in school activities. Parents were involved as resource persons in every school. Area youth groups participated to a limited extent by exchanging information and material. Numerous field trips were mad to businesses and industries in the area. Resource speakers from a variety of occupational areas made presentations providing career information and opportunities for students to ask questions.

The project definitely contributed to improvement of methods and curricular materials. In service training for classroom teachers increased, audio-visual equipment and materials were acquired and utilized and teacher-made units were developed. A Career Education center was developed and made materials available to all schools.

With the implementation of the exemplary career education program, students in every grade level in Emporia, Kansas were exposed to meaningful exploratory and career orientation activities. The results of the student evaluation indicate achievement in a variety of career education objectives as a result of the career education program. Classes were made more meaningful to the students by relating the subject matter to career development. Students had more opportunity to develop occupational awareness and appropriate attitudes about the personal and social importance of work. More students were offered the opportunity to develop marketable skills prior to leaving school.

The exemplary career education program increased student, faculty and community awareness of how career education can be meaningfully integrated into many aspects of the educational system.

CE 008 415